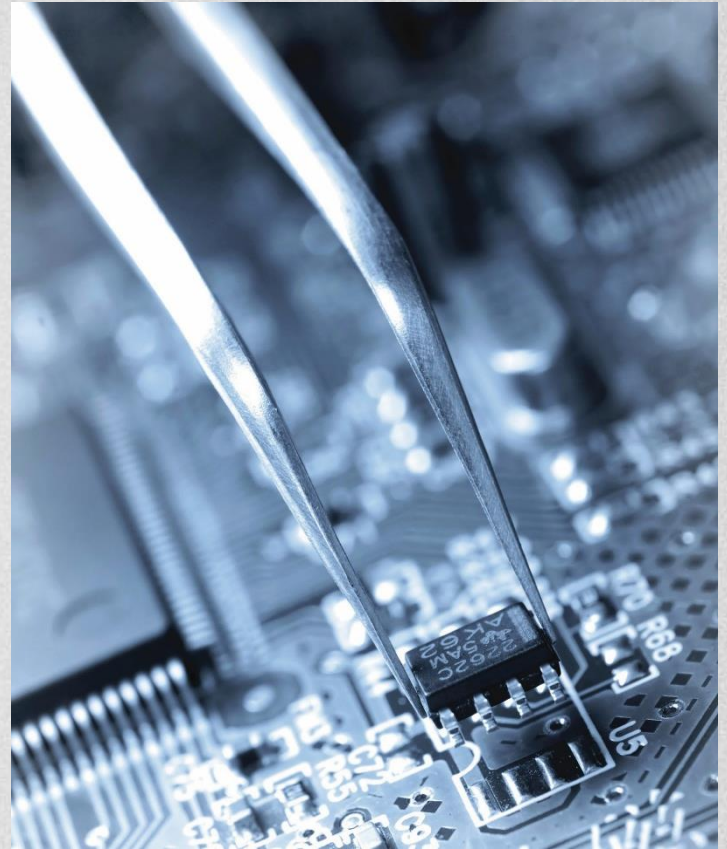


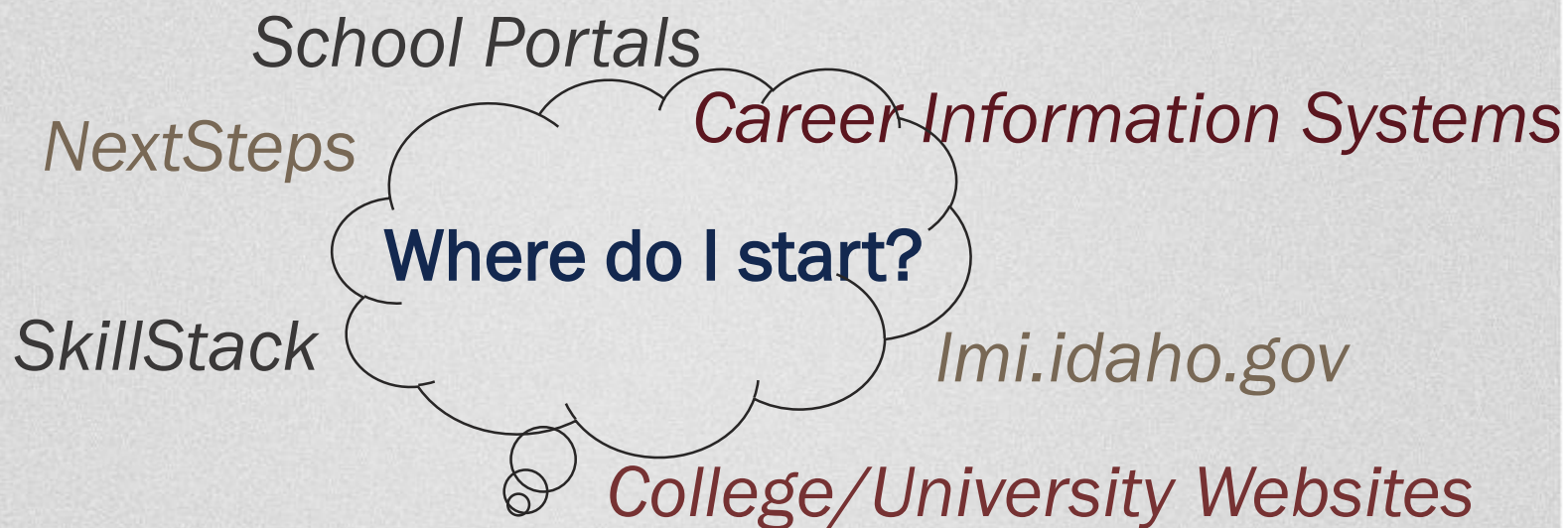
Connecting PTE to Careers in Idaho

Wendi Secrist | Director, Business Outreach

July 21, 2015



Resources




In the World of PTE ...

Graduation Plans


Career Ladders

SkillStack

Remember these?




Foundation Knowledge and Skills
Academics • Communications
Problem Solving • Information Technology
Systems • Safety, Health and Environment
Teamwork • Ethics
Employability and Career Development
Technical Skills



Information Technology Individual Graduation Plan

PROGRAMMING AND SOFTWARE DEVELOPMENT

This career cluster plan of study is a source of information as you develop your own personal learning plan. This plan lists **EXAMPLES** of suggested coursework. Courses will vary according to the availability in each school district. Plans of study should meet high school graduation requirements as well as entrance requirements for a variety of postsecondary options within this career cluster.



■ Coursework					
Subject	9 th Grade	10 th Grade	11 th Grade	12 th Grade	Advanced Coursework for Postsecondary Credit
Language Arts (9 credits)	English 9	English 10 Speech	English 11	English 12	Tech Prep Advanced Placement
Mathematics (6 credits)	Algebra I	Geometry Algebra II	Pre-Calculus	Calculus Statistics	Tech Prep Advanced Placement
Science (6 credits)	Earth Science	Biology	Chemistry Anatomy/Physiology	Physics	Tech Prep Advanced Placement
Social Studies (5 credits)			US History 11	American Government Economics	Tech Prep Advanced Placement
Idaho Professional-Technical Education/Other Classes	TI 0550 Intro to Netwk/InfoIntract Programming	TI 0557 Programming Fndmnts Sophomore Beginning Sequence: TI 0550 Intro to Netwk/InfoIntract Programming	TI0558 Advanced Programming And/Or TI0611 Projects in IT	TI 0610 Software Applications And/Or TI 0611 Projects in IT or TI0655 Occ & Career Experience for IST TI0558 Advanced Programming And/Or TI0611 Projects in IT	Tech Prep and/or Articulated Classes with College Name
Additional Requirements or Electives	World History Geography	US History 10 Physical Education Health Foreign Language Computer Technology	Physical Education Health Foreign Language Computer Technology	Computer Technology	Tech Prep Advanced Placement
■ Extended Learning					
School-Based	Program Recognized Student Organization: TSA or SkillsUSA or BPA	Career Days	Career Interviews Job Shadowing	Internships Senior Project Service Learning Project	
Community-Based	Mentorships Industry sponsored camps & activities		Part-Time Employment Service Learning Project		

540 course hours and/or six (6) course credits qualify as meeting a program sequence.
Program of Study will be associated with and active in the Recognized Student Organization listed above.

Introducing PTE Career Ladders...



Career Ladder for IT

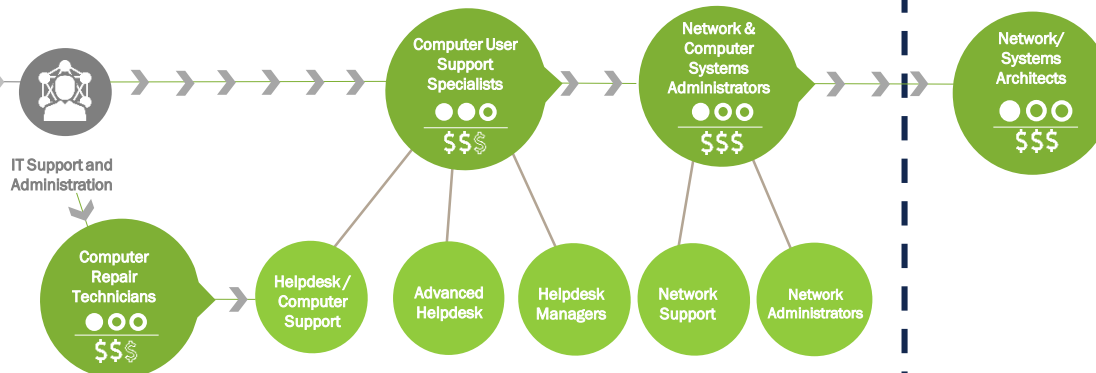
CORE SKILLS

Baseline:

- Communication
- Troubleshooting

IT Support:

- Technical Support
- Software Installation
- Computer Installation and Set Up
- Computer Repair



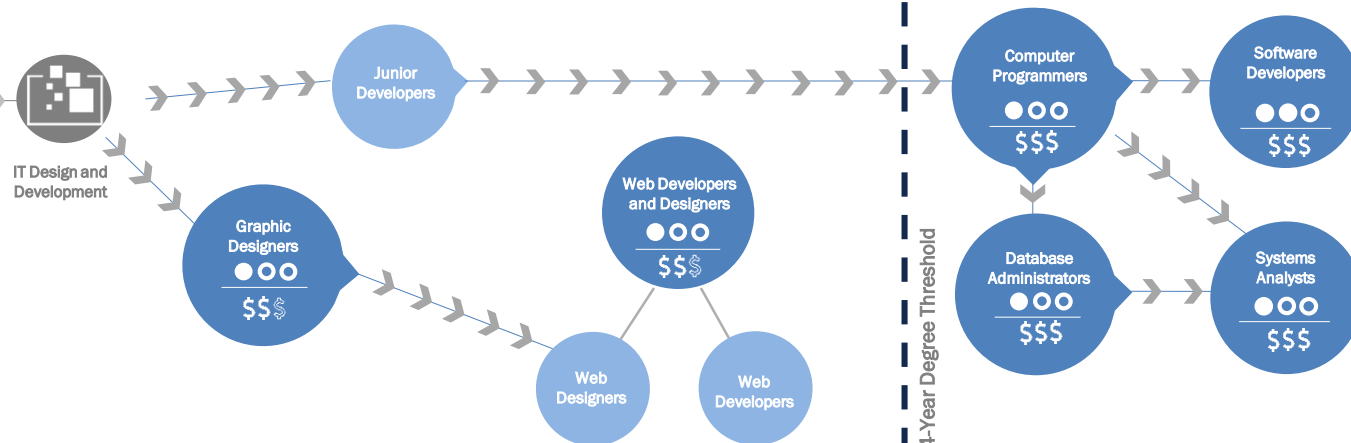
CORE SKILLS

Baseline:

- Communication
- Attention to Detail
- Meeting Deadlines
- Time-management
- Troubleshooting

IT Design:

- Web Concept Development
- Web Content and Design Editing
- Quality Assurance and Control



4-Year Degree Threshold

Idaho Demand

Low	Medium	High
●○○	●●○	●●●

Hourly Wage

>\$15	\$15-25	>\$25
\$\$\$	\$\$\$	\$\$\$

An in-depth look...

- Information Technology
- Health Care
- Selected Skilled & Technical Sciences
- Administrative Support
- Marketing & Sales



Career Ladder for IT

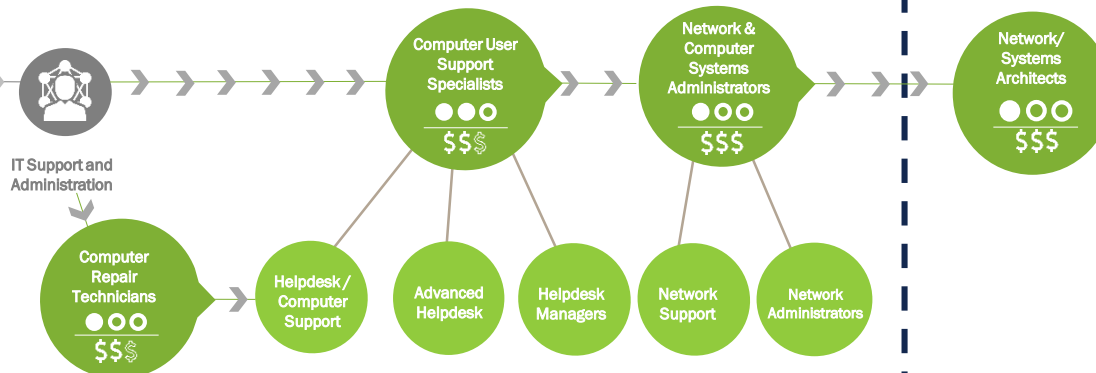
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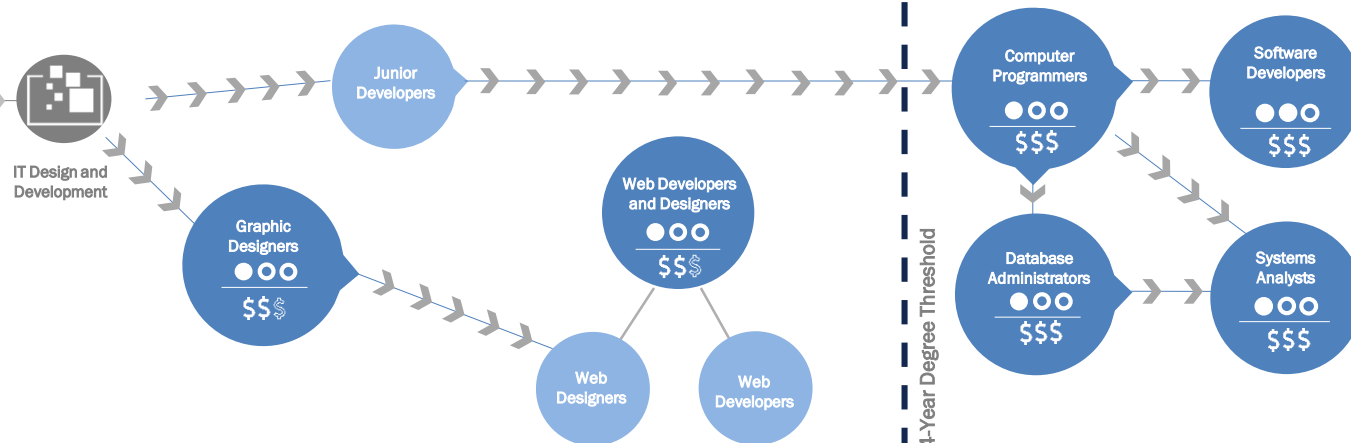
CORE SKILLS

Baseline:

- Communication
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- Troubleshooting

IT Design:

- Web Concept Development
- Web Content and Design Editing
- Quality Assurance and Control



4-Year Degree Threshold

Idaho Demand

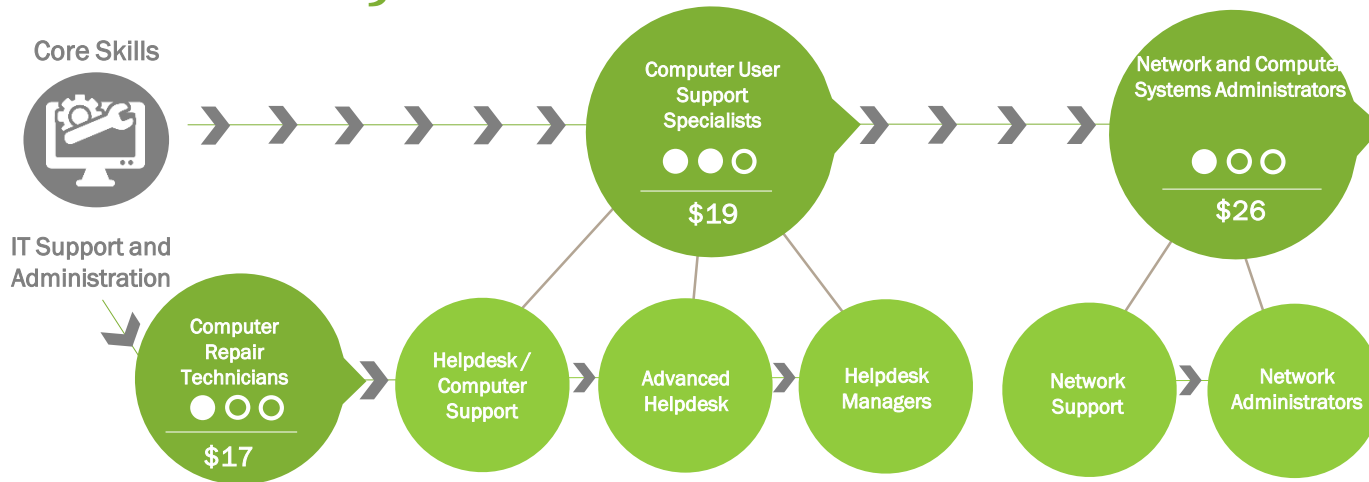
Low	Medium	High
●○○	●●○	●●●

Hourly Wage

>\$15	\$15-25	>\$25
\$\$\$	\$\$\$	\$\$\$



IT Support and Administration Pathway



**Advanced Role:
Typically Requires B.A.**

Idaho Demand		
Low ● ○ ○	Medium ● ● ○	High ● ● ●
Subject Intensive		
Math 📊	Writing ✍️	People Skills 👥
Skilled Labor 🔧	Science 🔬	Computer Skills 💻

Computer Repair Technician & Helpdesk



- Set up computer hardware and installing software.
- First-line troubleshooting a variety of computer problems.
- Set up and troubleshoot computer networks.

- CompTIA A+ Technician
- CompTIA Network+
- Cisco Certified Network Associate (CCNA)
- VMWare Certified Associate

Helpdesk Manager



- Management skills such as supervision and mentoring of helpdesk staff.

- IT Infrastructure Library (ITIL)
- Project Management Professional Certification (PMP)
- CompTIA Project+
- CompTIA Server+

Network & Computer Systems Administrators



- Advanced computer network skills such as network storage and disaster recovery planning.
- Advanced network support and security skills.

- Cisco Certified Network Associate & Professional
- VMWare Certified Professional
- Microsoft Certified Solutions Expert
- Red Hat Certifications

Network / Systems Architect



- Look for improvements in the efficiency of networks through network modeling and analysis.
- A bachelor's degree is typically needed to advance to this role.

- VMWare Advanced Certificates
- Red Hat Advanced Certificates
- Cisco Certified Network Professional
- CompTIA Security+

CERTIFICATION IN-DEMAND



IT Support and Administration Pathway

Skills for Advancement

Computer Repair Technician and Helpdesk

- System Configuration
- Cabling
- Network Configuration: Firewalls, Switches, VPNs

Additional Baseline Skills

- Customer Service
- Writing Skills
- Planning

+ Helpdesk Manager

- IT Management Skills (e.g. ITIL, Business Process)
- Client Management (e.g. SLAs)
- Management, Supervision and Mentoring

+ Network and Computer Systems Administrators

Network Support

- WAN
- TCP / IP
- Network Security

Administrator Skills

- Domain Name System (DNS)
- Microsoft Exchange Server
- Dynamic Host Configuration Protocol (DHCP)
- Network Attached Storage (NAS)
- Disaster Recovery Planning
- Lightweight Directory Access Protocol (LDAP)

Security Skills

- Cryptography
- Asset Protection
- Risk Assessment
- Malware Analysis
- Secure Sockets Layers
- Penetration Testing
- Host Based Security Systems

Systems Support

- LINUX/UNIX
- Windows Server
- SQL
- PERL

+ Network/Systems Architect

- Network Modeling
- Network Analysis
- Business Processes
- Configuration Management
- Concept Development

CERTIFICATION IN-DEMAND

- CompTIA A+ Technician
- CompTIA Network+
- Microsoft Technology Associate
- Cisco Certified Network Associate (CCNA)
- VMWare Certified Associate

- IT Infrastructure Library (ITIL)
- Project Management Professional Certification (PMP)
- CompTIA Project+
- CompTIA Server+

Systems Certifications

- Microsoft Certified Solutions Expert (MCSE)
- VMWare Certified Professional
- Red Hat Certified Engineer (RHCE)
- Red Hat Certified Systems Administrator (RHCSA)

Network Certifications

- Cisco Certified Network Professional (CCNP)
- CompTIA Security+

Systems Certificates

- VMWare Certified Advanced Professional
- Red Hat Certified Engineer (RHCE)
- Red Hat Certified Architect (RHCA)

Network Certifications

- Cisco Certified Network Professional (CCNP)
- CompTIA Security+

BADGES IN-DEMAND

PROGRAMS IN-DEMAND

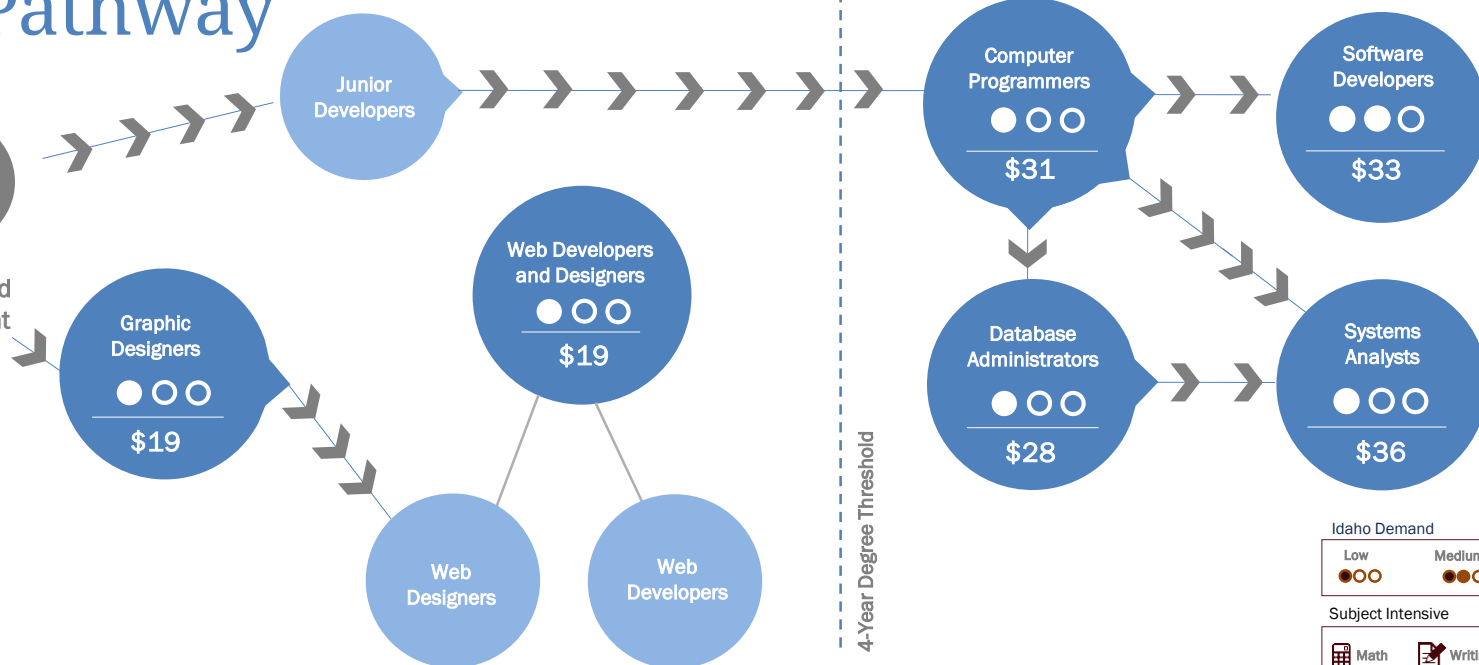


IT Design and Development Pathway

Core Skills



IT Design and Development



Idaho Demand



Subject Intensive



Graphic Designers



- Develop concepts and designing visualizations to specifications.
- Use graphic design software such as Adobe Illustrator, Photoshop and InDesign.

Web Designers



- Design websites/ user interfaces and manage site content
- Use web design and development software such as Adobe Dreamweaver

Web Developers



- Develop websites using programming languages such as HTML & CSS.
- Develop applications for the web.

Computer Programmers/ Software Developers



- Code software using programming languages such as Java and C++.
- Manage the development lifecycle of programs
- Troubleshoot and debug software issues.

Database Administrators



- Design, install, upgrade and provide support for databases.
- Monitor and tune database performance.

Systems Analysts



- Analyze business requirements to devise systems solutions.
- Build new or modify existing software to meet business and systems requirements.

CERTIFICATION
IN-DEMAND

- Oracle Certification
- Database Administrator
- Microsoft Certified Systems Engineer
- Security+

- Certified Information Systems Auditor
- Certified Information Systems Security Professional



IT Design and Development Pathway

Skills for Advancement

	Graphic Designers	Web Designers	Web Developers	Programmers / Software Developers	Database Administrators	Systems Analysts
	<ul style="list-style-type: none">Graphic designAdobe Creative SuiteTypesetting <p>Additional Baseline Skills</p> <ul style="list-style-type: none">OrganizationProject management	<ul style="list-style-type: none">Website Design Software<ul style="list-style-type: none">MS Visual StudioUser Interface designContent ManagementWeb Programming Languages:<ul style="list-style-type: none">JavaScriptHTML5CSSPHPWireframesInteraction Design	<ul style="list-style-type: none">Website developmentWeb programming languages:<ul style="list-style-type: none">JAVAMS C#PythonC++Web Development Languages<ul style="list-style-type: none">PHPRubyNode.jsHTML5Web application developmentDatabase Skills	<ul style="list-style-type: none">Programming Languages:<ul style="list-style-type: none">.NET programmingMicrosoft C#C++PythonDebugging and QATest Case PlanningSystems Development LifecycleTesting FrameworksServer and Database Skills<ul style="list-style-type: none">SQLApache WebserverTomcat	<ul style="list-style-type: none">Database Administration and ManagementDatabase DesignData WarehousingAdvanced SQL SkillsDisaster Recovery PlanningRelational DatabasesDatabase Analysis Skills	<ul style="list-style-type: none">Business ProcessingBusiness AnalysisAudit PlanningSystems ArchitectureSystems DesignRisk Management
CERTIFICATION IN-DEMAND		<ul style="list-style-type: none">CIW CertificationsMicrosoft Technology Associate (MTA): HTML5Microsoft Certified Solutions DeveloperCertified Web DesignerAssociate Webmaster Professional (AWP)CompTIA CDIA+	<ul style="list-style-type: none">CIW CertificationsOracle Java CertificatesHTML Developer CertificateRuby Association Certified Ruby ProgrammerOracle Database CertificatesCompTIA Linux+	<ul style="list-style-type: none">CompTIA Mobility+CompTIA Mobile App Security+	<ul style="list-style-type: none">Oracle 11gDatabase AdministratorMicrosoft Certified Database AdminMongoDB / noSQL CertificationMY SQL 5.6 Database AdminCompTIA Storage+	<ul style="list-style-type: none">Certified Information Systems Auditor (CISA)Certified Information Systems Security Professional (CISSP)Information Security Analyst (ISA)CompTIA Advanced Security Practitioner (CASP)
BADGES IN-DEMAND						
PROGRAMS IN-DEMAND						

Integration

What are your thoughts?

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